



# Grade 7

## Sample Released Questions with Annotated Student Responses

**2004**

This document represents the second phase of released sample questions from the Kentucky Core Content Test. While the first phase provided released questions, background, and general scoring information about the questions, this second phase includes more specific information to assist teachers in scoring student responses for the open-response questions and on-demand writing tasks.

Each open-response question, the Academic Expectation(s) and Code(s) from the Core Content for Assessment that it addresses, as well as the scoring guide describing expectations for performance at each score point, are followed by actual student responses at the “4,” “3,” “2,” and “1” score points. For on-demand writing, student responses at the “Distinguished,” “Proficient,” “Apprentice,” and “Novice” levels are provided. Each student paper is accompanied by commentary explaining the rationale for the score given. Finally, ideas are presented for designing classroom activities that relate to the Core Content for Assessment.

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# KENTUCKY GENERAL SCORING GUIDE

<b>SCORE POINT 4</b>	<ul style="list-style-type: none"> <li>• You complete all important components of the question and communicate ideas clearly.</li> <li>• You demonstrate in-depth understanding of the relevant concepts and/or processes.</li> <li>• Where appropriate, you choose more efficient and/or sophisticated processes.</li> <li>• Where appropriate, you offer insightful interpretations or extensions (generalizations, applications, analogies).</li> </ul>
<b>SCORE POINT 3</b>	<ul style="list-style-type: none"> <li>• You complete most important components of the question and communicate clearly.</li> <li>• You demonstrate an understanding of major concepts even though you overlook or misunderstand some less-important ideas or details.</li> </ul>
<b>SCORE POINT 2</b>	<ul style="list-style-type: none"> <li>• You complete some important components of the question and communicate those components clearly.</li> <li>• You demonstrate that there are gaps in your conceptual understanding.</li> </ul>
<b>SCORE POINT 1</b>	<ul style="list-style-type: none"> <li>• You show minimal understanding of the question.</li> <li>• You address only a small portion of the question.</li> </ul>
<b>SCORE POINT 0</b>	<ul style="list-style-type: none"> <li>• Your answer is totally incorrect or irrelevant.</li> </ul>
<b>BLANK</b>	<ul style="list-style-type: none"> <li>• You did not give any answer at all.</li> </ul>



## **Grade 7**

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## **Reading**

# READING

## BRIAN'S WINTER

He didn't know the time but somewhere in the middle of the night he awakened suddenly. He had come to rely on his senses and he knew something had changed to snap him awake that way and he lay with his eyes wide in the dark, listening, smelling, trying to see.

He did not have long to wait.

There was a soft rustle, then a whoofing sound and the whole wall of the shelter peeled away from the rock as if caught in an earthquake, away and down and Brian—still in his bag—was looking up in the dark at the enormous form of a bear leaning over him.

There was no time to react, to move, to do anything.

Meat, Brian had time to think—he's smelled the venison and come for it. He's come for the mea—

And it was true. The bear had come for the meat but the problem was that Brian lay between the bear and the meat, and the bear cuffed him to the side. As it was it wasn't much of a cuff—nowhere near what the bear could have done, which would have broken Brian's legs—but the bag was zipped and Brian became tangled in it and couldn't move fast enough to stay out of the way so the bear hit him again.

This time hard. The blow took Brian in the upper thigh and even through the bag it was solid enough to nearly dislocate his hip.

He cried out. "Ahhhh . . ."

The bear stopped dead in the darkness. Brian could see the head turn to look back and down at him, a slow turning, huge and full of threat, and the bear's breath washed over him and he thought I am going to die now. All this that I have done and I'm going to die because a bear wants to eat and I am in the way. He could see the bear's teeth as it showed them and he couldn't, simply couldn't do anything; couldn't move, couldn't react. It was over.

The bear started to move down toward Brian and then hesitated, stopped and raised its head again and turned to look back over its shoulder to the left.

Half a beat and Brian lay still, staring up at the bear. But now a new smell, over the smell of the bear; a rank, foul, sulfurous and gagging smell as the bear turned and took a full shot of skunk spray directly in the eyes.

Betty had arrived. Whether she'd just been out hunting and had come back or had been awakened and surprised or simply didn't like bears very much—whatever the reason she had dumped a full load in the bear's face.

The effect was immediate and devastating.

“Rowwrrrmph!”

The bear seemed to turn inside itself, knocking Brian farther to the side, and rolled backward out of the shelter area, slamming its head back and forth on the ground, trying to clear its eyes, hacking and throwing up as it vanished in the night.

Brian looked to the source of all this. Betty stood near the end of the shelter, still with her tail raised, only now aimed at Brian. She twitched it once, then again, and Brian shook his head.

“I’m sorry. I just didn’t think you’d be thinking of food . . .” He took a piece of meat from the pile—a big one—and tossed it to her and she lowered her tail, picked up the meat and waddled off into the dark in the direction of her burrow.

Brian lay back in his bag. His shelter was a mess, the wall tipped over, and his hip hurt, but it wasn’t raining and the bag was warm. He could fix things up in the morning.

The stink of skunk was everywhere—much of what Betty had shot at the bear had gone around it and hit the wall—but Brian didn’t mind. In fact, he thought, I’ve grown kind of fond of it. I’ll have to make sure to give her extra food. It was like having a pet nuclear device.

He went to sleep smiling.

This passage from *Brian’s Winter* tells the story of an adventure in the wilderness.

- a. Identify **two** events that are described in the passage.
- b. Compare the feelings that Brian had during each of these events. Use details from the passage to support your answer.

**Academic Expectation:** 1.2 “Students make sense of the variety of materials they read.”

**Core Content Code:** 1.0.14 “Analyze the relationship between events in a story and a character’s behavior.”

**Core Content Code:** 1.0.9 “Reflect on and evaluate what is read.”

## *Brian's Winter*

### Scoring Guide

SCORE	DESCRIPTION
4	Student identifies two events from the passage and clearly compares the feelings that Brian had during each of these events. Student uses details from the passage to clearly support the answer.
3	Student identifies two events from the passage and generally compares the feelings that Brian had during each of these events. Student uses details from the passage to generally support the answer.
2	Student identifies two events from the passage and gives a limited comparison of Brian's feelings during each of these events.
1	Student demonstrates minimal understanding (e.g., student identifies an event and/or feeling(s) from the passage).
0	Student's response is totally incorrect or irrelevant.
Blank	No student response.

#### **Examples of events:**

- Brian woke up suddenly.
- Bear appeared.
- Bear hit Brian.
- Brian cried out.
- Betty arrived.
- Betty sprayed the bear.
- Bear rolled backwards.
- Brian rewarded Betty with meat.
- Brian lay back in his sleeping bag.
- Brian went to sleep.

#### **Examples of feelings:**

- Lonely
- Scared
- Warm and comfortable
- Surprised
- Afraid
- Pain
- Relief
- Confident
- Back in control
- Safe
- Thankful
- Proud
- Grateful

## Annotated 4-Point Student Response

An effort has been made to reproduce the sample student papers as closely as possible to the original handwritten copy, including any grammatical errors in usage. Scores are given based on evidence of relevant content knowledge only. Spelling and grammatical errors have no impact on scores as long as the response is understandable. Writing skills such as spelling and grammar are evaluated as one component of holistic scoring in on-demand writing tests administered at grades 4, 7, and 12.

In the level "4" student response below, up to three errors related to writing skills are highlighted with light gray shading. These errors have no impact on scoring because the response is understandable.

### Student Response

The article, "Brian's Winter" tells about several adventures of Brian while he's in the wilderness. Two of the adventures mentioned in our exert of the story include a bear attack, and a skunk spraying the bear. The story says that the reason the bear attacked was because it smelled Brian's venison (deer meat). Right before the bear killed Brian, a skunk (which he had obviously seen before), walks in and sprays the bear, forcing the bear to leave.

Let's look at Brian's feelings during both of these events. During the bear attack it was mostly likely that Brain was feeling scared, frightened, and nervous. He was also probably a little startled by the bear's attack and worried about what the outcome would be. This can be confirmed when the story says, "Brian lay still, staring up at the bear." The story also says though that "He couldn't react."

Now the second event, the skunk saving him from the vicious attack. I'm sure during this part of the story Brian was feeling great relief and appreciation to the skunk for saving his life. I know I would be. This can confirmed if you look near the end of the book when it says that he had actually learned to like the smell of skunk. This was probably because it was linked to positive memories of skunks. The book also says he fell asleep smiling. I think its very interesting to look at characters emotions throughout the story's course

Student identifies two events from the story (i.e., bear attacking Brian, skunk spraying the bear).

Student clearly compares the feelings Brian was having during the first event (i.e., scared, frightened, nervous, startled) and the second event (i.e., relief and appreciation) and uses several appropriate details from the text as support.

Overall, the student demonstrates in-depth knowledge of the text and an ability to identify pertinent details from the story. The student identifies two events from the story, compares Brian's feelings during each event, and supports ideas with details from the text.

## Annotated 3-Point Student Response

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### Student Response

I think Brian's Winter was a Story about the courage of Brian as he got through the night. Two different parts of this story displayed contrasting events toward one another.

One was when the bear had come & was about to eat Brian. You could sense the herendous fear that Brian had in this story. He knew for an almost sure fact that he was going to be dead but on the other hand...

Brian also went to sleep smiling because the skunk saved his life. He was so glad, he gave it a big hunk of meat.

Brian survived his winter but most important, he learned what little things can help you in life.

Student's introduction does not include any information required by the question; therefore, it does not count toward the student's score.

Student identifies two events from the story (i.e., bear attack, going to bed).

Student generally compares the feelings Brian was having during the first event (i.e., horrendous fear) and the second event (i.e., smiling) using a few appropriate details from the passage as support (i.e., he knew he was going to die, he went to sleep smiling, he gave the skunk a hunk of meat).

Overall, the student demonstrates general knowledge of the text and some ability to identify pertinent details from the story. The student identifies two events from the story and compares Brian's feelings during each event. However, the student provides only a few details from the text and does not explicitly identify Brian's feelings during the second event.



## Annotated 2-Point Student Response

*An effort has been made to reproduce the sample student papers as closely as possible to the original handwritten copy, including any grammatical errors in usage. Scores are given based on evidence of relevant content knowledge only. Spelling and grammatical errors have no impact on scores as long as the response is understandable. Writing skills such as spelling and grammar are evaluated as one component of holistic scoring in on-demand writing tests administered at grades 4, 7, and 12.*

### Student Response

In Brians Winter the bear was looking at Brian that made him very scared and he probaly felt like getting up and running. When Betty sprayed the bear Brian probaly felt sick, afraid, and relieved.

Student identifies two events from the story (i.e., the bear's intrusion, the skunk spraying the bear) and gives a limited comparison of Brian's feelings.

Overall, the student demonstrates literal knowledge of the text and minimal ability to identify pertinent details from the story and apply them to the answer. The student identifies two events from the story and provides a limited comparison of Brian's feelings during each event. The student's comparison of Brian's feelings during the two events is limited because it does not include any details from the passage as support.

## Annotated 1-Point Student Response

*An effort has been made to reproduce the sample student papers as closely as possible to the original handwritten copy, including any grammatical errors in usage. Scores are given based on evidence of relevant content knowledge only. Spelling and grammatical errors have no impact on scores as long as the response is understandable. Writing skills such as spelling and grammar are evaluated as one component of holistic scoring in on-demand writing tests administered at grades 4, 7, and 12.*

### Student Response

When the Bear frist came in has Bedroom and when and when the bear turned and took a full. When Brian frist seen the bear he was scard. But when the Bear fell to the floor I think he was sad. I think Brian had strong feeling for the Bear.

Student identifies Brian's feelings during one incident from the story (i.e., he was scared when the bear first came in).

Overall, the student demonstrates minimal knowledge of the text. Much of the detail included in the response is incorrect (i.e., describing Brian's shelter as a "bedroom," saying that the bear fell). The student draws conclusions about the character's emotions that are not supported by the text (i.e., describing Brian as "sad" and having "strong feeling for the bear" when the passage describes Brian as going to sleep with a smile).

## Instructional Strategies

The open-response question for *Brian's Winter* was designed to assess students' ability to (1) make sense of the variety of materials they read, (2) analyze the relationship between events in a story and a character's behavior, and (3) reflect on and evaluate what is read. The instructional strategies below present ideas for helping students explore and master these concepts.

Invite local authors to talk about how they make explicit, in their writing, the relationship between the events in their stories and a character's behavior and feelings.

Have students work individually, in pairs, in small groups, and/or as a class to complete any or all of the following activities.

- Make a list of the events in this story and the feelings Brian experienced. Discuss and develop a mind map of how the feelings Brian experienced were related to each of the events on the list.
- Read a short story or an excerpt from a book and reflect on how the events in the story influence how a character feels. Develop a list of the events in the story and the feelings the character experienced. Write a detailed journal entry of two events and compare the feelings the character had during each of the events.
- Make a drawing or write a “showing not telling” paragraph that illustrates how one of the events on the list of events influenced the feelings of the character. Ask your response group for feedback and finalize the drawing or paragraph.
- Write a journal entry about how an event in your life influenced your feelings. Reverse this and write a journal entry about how your feelings influenced an event in your life.
- Brainstorm a list of stories that are good examples of how the events in the story influence how a character feels. Ask other students, your teachers, or the school librarian to review this list and add their ideas. Post this list in your classroom.

- Visit a local park or playground and observe young children playing. Can you see how their feelings are influenced by events that happen to them? Examples might be: another child gets in front of them, they climb to the top of a slide and see their mothers are at the bottom to catch them, a large dog approaches the play area, etc. Write a journal entry of your observations.
- Make an appointment to read to some preschool or kindergarten kids. Talk to the children's librarian in your town library and get some ideas for what you could read to young children. After your reading visit, ask yourself if what you observed at the playground is similar to or different from what you observed in a more formal school atmosphere. Write a journal entry about your observations.
- Locate a personal account of something going on in your community or in the world in a newspaper/magazine and use it as a writing prompt for a narrative that shows how people's feelings can influence what happens to them.
- Watch a movie and write a summary of the story. Focus the summary on an analysis of the relationship between the events in the movie and a character's feelings.
- Interview someone at least ten years older than yourself. Use interview questions that you developed to get the person to talk about a time in his/her life where events influenced how this person felt.

# the sneaky sell

## Sweepstakes Surprises

Imagine shooting hoops with Michael Jordan! That was the top prize in McDonald's *NBA Fantasy* sweepstakes. Other recent sweepstakes prizes: a visit to the set of *90210* (from Hi-C), a week at Disney World (from Quaker Oatmeal). But before you buy a product just to try for a cool prize, check out these surprises.

❑ **You can try to win for free.** Companies hope you'll buy their product to enter their sweepstakes. But you can write for a *free* entry form without buying anything. As long as it's just a matter of *chance* whether you win, companies can't make you buy stuff to enter a sweepstakes. Of course, you need super eyes to learn where to write. The address for free forms is usually in tiny letters.

Are you more likely to win if you buy the product? No, that's against the law. "We keep all entries in the same pile," said a cereal company official. "You have just as good a chance of winning if you don't buy the product."

❑ **Look-alikes.** Products that have sweepstakes are often ones where there are several brands that are very much alike. For example, there are so many cereals it's hard for one to stand out. Companies use sweepstakes to make a cereal *seem* different. "People might be persuaded by a neat sweepstakes prize to try our cereal instead

of another," said a cereal official. The same goes for other look-alike products (sodas, fruit drinks, fast food). But an ad expert said: "If companies need a prize to keep a product selling, they should change the product."

❑ **They want your address.** If you send in an entry form, you may get mail you didn't expect. Companies figure people who enter their sweepstakes are interested in their products. Some companies then mail ads about their other products to those people.

❑ **Likely to win? NOT!** TV ads for Hi-C's *90210* sweepstakes made a big deal about winning that visit to the *90210* set. The ad said: "Thousands will enter. Hundreds will win great prizes." That made Virginia angry: "There's only *one* Grand Prize (the visit to the set). Only *one* person will win that." The "hundreds" of winners mentioned in the ad will win a poster or CD.

McDonald's said only one person out of 75 million would win its top prize and go one-on-one with Mike. That's about how many kids under age 19 live in the U.S. — 75 million. It's as if only *one* kid in the whole country had a chance to win that prize. The prize you were most likely to win? A sticker worth \$2.

❑ **Taxes.** If you win a \$2 sticker, don't worry. But win big and you may owe income tax. Prizes are income. Companies have to tell the government the names of big winners and what the prizes are worth. That trip to meet Michael Jordan is worth about \$8,000. A 12-year-old with no other income who won that prize might owe \$600 in taxes. Surprise!

This article offers guidelines to help people make wiser decisions about entering sweepstakes. Select **three** important ideas from this article and explain how each one could help people make wiser decisions about entering sweepstakes. Fully explain your answer using examples from the article.

**Academic Expectation:** 1.2 “Students make sense of the variety of materials they read.”

**Core Content Code:** 2.0.14 “Analyze the relationship between events in a story and a character’s behavior.”

**Core Content Code:** 2.0.10 “Connect information from a passage to students’ lives and/or real world issues.”

## *The Sneaky Sell*

### Scoring Guide

SCORE	DESCRIPTION
4	Student selects three ideas from the article and clearly explains how each idea could help people make wiser decisions about entering sweepstakes. Student uses examples from the article as support.
3	Student selects three ideas from the article and generally explains how each idea could help people make wiser decisions about entering sweepstakes. Student uses examples from the article as support. <b>OR</b> Student selects two ideas from the article and clearly explains how each idea could help people make wiser decisions about entering sweepstakes. Student uses examples from the article as support.
2	Student selects two or three ideas from the article and gives a limited explanation of how each idea could help people make wiser decisions about entering sweepstakes. <b>OR</b> Student selects one idea from the article and clearly explains how it could help people make wiser decisions about entering sweepstakes. Student uses at least one example from the article as support.
1	Student demonstrates minimal understanding (e.g., student selects one idea from the article and gives a limited explanation of how it could help people make wiser decisions about entering sweepstakes).
0	Student's response is totally incorrect or irrelevant.
Blank	No student response.

### Examples of ideas from the article:

- You can enter a sweepstakes without buying a product.
- Look-alikes can be deceiving.
- They want your address for mailing lists.
- The chances of winning are slim—there is usually only one BIG winner.
- You have to pay taxes on your winnings.

## Annotated 4-Point Student Response

An effort has been made to reproduce the sample student papers as closely as possible to the original handwritten copy, including any grammatical errors in usage. Scores are given based on evidence of relevant content knowledge only. Spelling and grammatical errors have no impact on scores as long as the response is understandable. Writing skills such as spelling and grammar are evaluated as one component of holistic scoring in on-demand writing tests administered at grades 4, 7, and 12.

In the level “4” student response below, up to three errors related to writing skills are highlighted with light gray shading. These errors have no impact on scoring because the response is understandable.

### Student Response

One guideline to help people make wiser decisions about entering sweepstakes is taxes. If you were to enter McDonald's NBA Fantasy Sweepstakes and won the one-on-one with Micheal Jordan you would owe big income taxes. The trip to meet Micheal is worth about \$8,000, which could make you owe \$600! This would help people make wiser decisions because it makes you aware that the prizes could cost you and not be free.

Another important guideline is mail. If you enter sweepstakes, the company gets your address. They think you're interested in their products and start sending you junk mail. This will help you make wiser decisions because unless you enjoy junk mail, it's only a burden. This information could save you that burden.

A third import guideline that could help you is that you are not likely to win big. Consider this: in the McDonald's Sweepstakes for Micheal Jordan you have a one in 75 million chance of winning the grand prize. You are not very likely to win. This could help you know that unless you don't mind the guidelines listed above, it's not worth trying. These are 3 important guidelines to help you.

Student selects an important idea from the article (i.e., taxes) and clearly explains how it could help people make wiser decisions about entering sweepstakes.

Student selects a second idea from the article (i.e., junk mail) and clearly explains how it could help people make wiser decisions about entering sweepstakes.

Student selects a third idea from the article (i.e., chance of winning) and clearly explains how it could help people make wiser decisions about entering sweepstakes.

Overall, the student demonstrates in-depth knowledge of this practical text. The response presents three important ideas from the article and clearly explains how each idea could help people make wiser decisions about entering sweepstakes.



## Annotated 3-Point Student Response

*An effort has been made to reproduce the sample student papers as closely as possible to the original handwritten copy, including any grammatical errors in usage. Scores are given based on evidence of relevant content knowledge only. Spelling and grammatical errors have no impact on scores as long as the response is understandable. Writing skills such as spelling and grammar are evaluated as one component of holistic scoring in on-demand writing tests administered at grades 4, 7, and 12.*

### Student Response

I just read the article "The Sneaky Sell." I am asked to give 3 things to make people make wiser decisions about entering sweepstakes.

After reading the article, I found sweepstakes are not all they have said to be.

TV ads for Hi-C's 90210 sweepstakes say that "Thousands enter. Hundreds will win great prizes." But actually there is only one grand prize winner out of the thousands. The other winners will will a poster or CD.

Winning the grand prize may be great, but taxes are a problem. In the article it said that a 12 year old with no income won the grand prize at McDonalds. He might owe \$600 in taxes!!

Also, if you send in the entry form in for a sweepstakes, you may expect junk mail. Other compaines get ahold of your address and mail you ads for their products. It just doesn't sound worth in, considering 1 out of million will win.

This was my 3 example of how to become wiser at winning sweepstakes.

Student restates the question. This does not count toward the student's score.

Student selects an important idea from the article (i.e., chance of winning) and generally explains how it could help people make wiser decisions about entering sweepstakes.

Student selects a second idea from the article (i.e., winning is great, taxes are a problem) and generally explains how it could help people make wiser decisions about entering sweepstakes.

Student selects a third idea from the article (i.e., junk mail) and generally explains how it could help people make wiser decisions about entering sweepstakes. Student relates explanation (i.e., it just isn't worth it) back to the first idea presented (i.e., chance of winning).

Overall, the student demonstrates general knowledge of this practical text. The student presents and generally explains three important ideas from the article. The explanations are general because they indirectly, rather than directly, address the question (how the idea could help people make wiser decisions about entering sweepstakes). Although it is not presented until the end of the response, the student is given credit for an explanation of the first idea (i.e., chance of winning) because the student explicitly links the explanation to the idea.

## Annotated 2-Point Student Response

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### Student Response

Taxes if you win. If A younger person like 14 won a \$9,000 prize the will have to pay about 600 in taxes.

The want your address because where they can send you junk mail.

Likely to win. Your not likely to win

Student selects an important idea from the article (i.e., taxes) and provides a limited explanation of how it could help people make wiser decisions about entering sweepstakes.

Student selects a second idea from the article (i.e., junk mail) and provides a limited explanation of how it could help people make wiser decisions about entering sweepstakes.

Student selects a third idea from the article (i.e., unlikely to win) and provides a limited explanation of how it could help people make wiser decisions about entering sweepstakes.

Overall, the student demonstrates literal knowledge of this practical text. The student identifies three ideas from the article, but the explanations given are limited because they do not go beyond the information provided in the text.

## Annotated 1-Point Student Response

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### Student Response

One of the ways to help enter a sweepstakes is The address for free forms i usually in tiny letters, make sure you know what you are sending for, and do not think you have to buy the product to win just send for a form.

Student discusses one idea from the article (i.e., you can try to win for free) and provides a limited explanation of how it could help people make wiser decisions about entering sweepstakes.

Overall, the student demonstrates minimal knowledge of this practical text. The student selects only one idea from the article that could help people make wiser decisions about entering sweepstakes. Because the explanation does not go beyond what is provided in the text, it is considered limited.

## Instructional Strategies

The open-response question for *The Sneaky Sell* was designed to assess students' ability to (1) make sense of the variety of materials they read, (2) analyze the relationship between events in a story and a character's behavior, and (3) connect information from a passage to a real-world issue. The instructional strategies below present ideas for helping students explore and master these concepts.

Provide opportunities for students to work individually, in pairs, in small groups, and/or as a class to complete (with teacher guidance and support) any or all of the following activities:

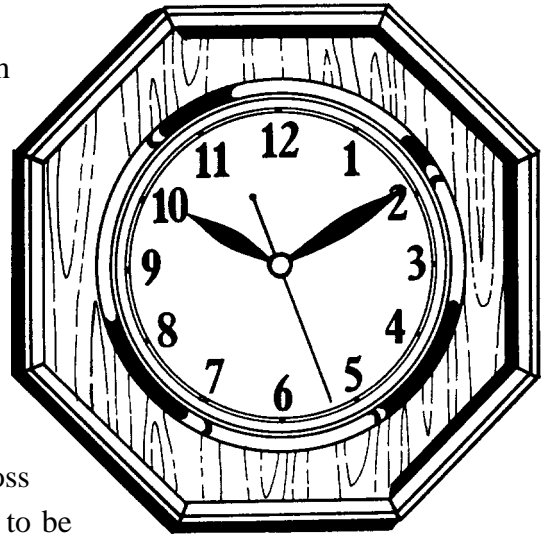
- Read the article about how to make informed decisions when entering sweepstakes contests. Write a summary and get feedback from your response group. Remember, your response group will use the following criteria to give you feedback on your summary: summarizes information, identifies bias and/or misinformation, distinguishes between fact and opinion, and identifies arguments and supporting evidence. Use your response group's feedback to finalize your summary.
- Make a list of the magazines in your school or community library for your age group. Count how many sweepstakes offers there are in these magazines.
- Collect three sweepstakes ads. Carefully review these ads and highlight important information about sweepstakes that you learned from *The Sneaky Sell*.
- Select one of the ads and create a poster that shows the questions people should ask themselves before entering the sweepstakes.
- Make an oral presentation, using your poster advising your classmates about what they need to think about to make a wise decision about entering a sweepstakes.
- Write a letter to a company offering a sweepstakes requesting a "free entry form without buying anything." Write a short newspaper article to discuss any of the unexpected results (or, as *The Sneaky Sell* article says, "surprises") that wait for those who enter this sweepstakes.

- Write or call a company offering a sweepstakes and ask for specific information about how the company uses the names of those entering the contest. Ask how a person can make sure that their name is not used for company mailings or sold to other companies.
- Research information about a sweepstakes winner. Write a short report on what happened to the winner.
- Think about what you have learned about sweepstakes and about the opinions of the author of *The Sneaky Sell*. Make a journal entry comparing your opinions with those of the author of *The Sneaky Sell*.

# Dial Versus Digital

Isaac Asimov

There seems no question but that the clock dial, which has existed in its present form since the seventeenth century and in earlier forms since ancient times, is on its way out. More and more common are the digital clocks that mark off the hours, minutes, and seconds in ever-changing numbers. This certainly appears to be an advance in technology. You will no longer have to interpret the meaning of “the big hand on the eleven and the little hand on the five.” Your digital clock will tell you at once that it is 4:55. And yet there will be a loss in the conversion of dial to digital, and no one seems to be worrying about it.



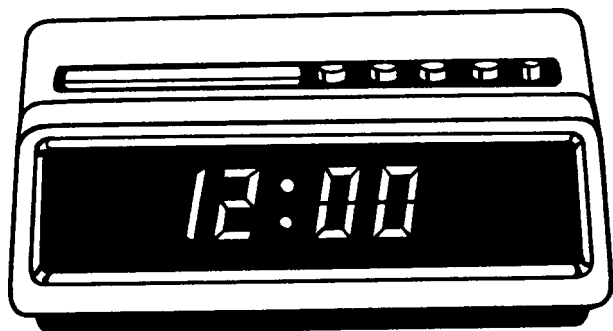
When something turns, it can turn in just one of two ways, clockwise or counterclockwise, and we all know which is which. Clockwise is the normal turning direction of the hands of a clock and counterclockwise is the opposite of that. Since we all stare at clocks (dial clocks, that is), we have no trouble following directions or descriptions that include those words. But if dial clocks disappear, so will the meaning of those words for anyone who has never stared at anything but digitals. There are no *good* substitutes for clockwise and counterclockwise. The nearest you can come is by a consideration of your hands. If you clench your fists with your thumbs pointing at your chest and then look at your fingers, you will see that the fingers of your right hand curve counterclockwise from knuckles to tips while the fingers of your left hand curve clockwise. You could then talk about a “right-hand twist” and a “left-hand twist,” but people don’t stare at their hands the way they stare at a clock, and this will never be an adequate replacement.

Nor is this a minor matter. Astronomers define the north pole and south pole of any rotating body in such terms. If you are hovering above a pole of rotation and the body is rotating counterclockwise, it is the north pole; if the body is rotating clockwise, it is the south pole. Astronomers also speak of “direct motion” and “retrograde motion,” by which they mean counterclockwise and clockwise, respectively.

Here is another example. Suppose you are looking through a microscope at some object on a slide or through a telescope at some view in the sky. In either case, you might wish to point out something to a colleague and ask him or her to look at it, too. “Notice that object

at eleven o'clock," you might say—or five o'clock or two o'clock. Everyone knows exactly where two, five, or eleven—or any number from one to twelve—is located on the clock dial, and can immediately look exactly where he is told. (In combat, pilots may call attention to the approach of an enemy plane or the location of antiaircraft bursts or the target, for that matter, in the same way.)

Once the dial is gone, location by "o'clock" will also be gone, and we have nothing to take its place. Of course, you can use directions instead: "northeast," "southwest by south," and so on. However, you will have to know which direction is north to begin with. Or, if you are arbitrary and decide to let north be straight ahead or straight up, regardless of its real location, it still remains true that very few people are as familiar with a compass as with a clock face.



Here's still another thing. Children learn to count and once they learn the first few numbers, they quickly get the whole idea. You go from 0 to 9, and 0 to 9, over and over again. You go from 0 to 9, then from 10 to 19, then from 20 to 29, and so on till you reach 90 to 99, and then you pass on to 100. It is a very systematic thing and once you learn it, you never forget it. Time is different! The early Sumerians couldn't handle fractions very well, so they chose 60 as their base because it can be divided evenly in a number of ways. Ever since, we have continued to use the number 60 in certain applications, the chief one being the measurement of time. Thus, there are 60 minutes in an hour.

If you are using a dial, this doesn't matter. You simply note the position of the hands and they automatically become a measure of time: "half past five," "a quarter past three," "a quarter to ten," and so on. You see time as space and not as numbers. In a digital clock, however, time is measured *only* as numbers, so you go from 1:01 to 1:59 and then move directly to 2:00. It introduces an irregularity into the number system that is going to insert a stumbling block, and an unnecessary one, into education. Just think: 5.50 is halfway between 5 and 6 if we are measuring length or weight or money or anything but time. In time, 5:50 is nearly 6, and it is 5:30 that is halfway between 5 and 6.

What shall we do about all this? I can think of nothing. There is an odd conservatism among people that will make them fight to the death against making time decimal and having a hundred minutes to the hour. And even if we do convert to decimal time, what will we do about "clockwise," "counterclockwise," and locating things at "eleven o'clock"? It will be a pretty problem for our descendants.

Discuss **three** arguments that the author uses in trying to convince the reader that dial clocks are better than digital clocks.

**Academic Expectation:** 1.2 “Students make sense of the variety of materials they read.”

**Core Content Code:** 3.0.15 “Identify the argument and supporting evidence.”

**Core Content Code:** 3.0.16 “Identify commonly used persuasive techniques (e.g., expert opinion, statistics, testimonial, bandwagon).”



## *Dial Versus Digital*

### Scoring Guide

SCORE	DESCRIPTION
4	Student clearly discusses three of the arguments the author uses to try to convince the reader that dial clocks are better than digital.
3	Student generally discusses two or three of the arguments that the author uses to try to convince the reader that dial clocks are better than digital. <b>OR</b> Student clearly discusses one of the arguments that the author uses to try to convince the reader that dial clocks are better than digital.
2	Student discusses in a limited way two of the arguments that the author uses to try to convince the reader that dial clocks are better than digital. <b>OR</b> Student generally discusses one of the arguments that the author uses to try to convince the reader that dial clocks are better than digital.
1	Student demonstrates minimal understanding (e.g., student provides limited discussion about clocks or one of the arguments the author uses to try to convince the reader that dial clocks are better than digital).
0	Student's response is totally incorrect or irrelevant.
Blank	No student response.

### **Examples of arguments the author uses to try to convince the reader that dial clocks are better than digital:**

- Following directions of clockwise and counterclockwise
- Defining north pole and south pole
- Describing location (i.e., object at five o'clock)
- Giving logic to Sumerians' 60-minute measurement of time
- Showing time as space

## Annotated 4-Point Student Response

An effort has been made to reproduce the sample student papers as closely as possible to the original handwritten copy, including any grammatical errors in usage. Scores are given based on evidence of relevant content knowledge only. Spelling and grammatical errors have no impact on scores as long as the response is understandable. Writing skills such as spelling and grammar are evaluated as one component of holistic scoring in on-demand writing tests administered at grades 4, 7, and 12.

In the level “4” student response below, up to three errors related to writing skills are highlighted with light gray shading. These errors have no impact on scoring because the response is understandable.

### Student Response

The author of this piece tries to explain how going from dial clocks to digital will present problems. To back his argument, he uses three reasons. First of all he talks about clockwise and counterclockwise. The author points out that people can easily tell clockwise from counterclockwise by watching the hands of a clock. Without dial clocks, it will be hard to tell the two apart.

Next he brings up number spotting. This is where you tell someone to look in a certain direction by giving the number on a clock that **correspon**s with that direction. For example, say you tell someone to look at twelve o'clock, they know to look up or straight ahead of them. This method of spotting is used most often by astronomers, combat pilots to identify targets, or by the blind to find their food on their plate. Without dial clocks this method of number spotting will cease to exist.

Last of all, the author talks about the difference of number counting and time counting. Because these two systems work towards different numbers that make a whole, people often tell time by the position of the clock hands, like half past four and quarter **'till** three. With digital clocks this doesn't work. Because of this, digital clocks make learning time harder and more complicated.

Student clearly discusses one argument from the article (i.e., clockwise/counterclockwise).

Student clearly discusses a second argument from the article (i.e., direction).

Student clearly discusses a third argument from the article (i.e., learning time will be harder).

Overall, the student demonstrates in-depth knowledge of this persuasive text and an ability to identify key arguments in the text. The student clearly discusses three arguments that the author uses to try to convince the reader that dial clocks are better than digital.

## Annotated 3-Point Student Response

*An effort has been made to reproduce the sample student papers as closely as possible to the original handwritten copy, including any grammatical errors in usage. Scores are given based on evidence of relevant content knowledge only. Spelling and grammatical errors have no impact on scores as long as the response is understandable. Writing skills such as spelling and grammar are evaluated as one component of holistic scoring in on-demand writing tests administered at grades 4, 7, and 12.*

### Student Response

Three arguments that the author makes in trying to convince the reader that dial clocks are better than digital clocks are that you wont be able to tell the difference in the direction of a turn, you wont be able to tell the direction of an object with a digital clock, and that you wont be able to note the position of hands as in "a half past three."

It will be harder to tell the direction of a turn because without the dial clock it will be hard to explain clockwise and counterclockwise.

You wont be able to locate an object by saying "enemy at twelve o'clock," if you dont know what a dial clock is.

You wont be able to note the position of hands by saying "a half past three" because a digital clock only has numbers, therefore making it hard to tell.

Student identifies three arguments from the article (i.e., clockwise/counterclockwise, direction, and position of clock hands).

Student generally discusses the three arguments.

Overall, the student demonstrates general knowledge of this persuasive text and a general ability to identify key arguments in the text. The student generally discusses three arguments that the author uses to try to convince the reader that dial clocks are better than digital. The student focuses on what one cannot do using digital clocks. Clear discussions would include how using dial clocks enables one to do those things.

## Annotated 2-Point Student Response

*An effort has been made to reproduce the sample student papers as closely as possible to the original handwritten copy, including any grammatical errors in usage. Scores are given based on evidence of relevant content knowledge only. Spelling and grammatical errors have no impact on scores as long as the response is understandable. Writing skills such as spelling and grammar are evaluated as one component of holistic scoring in on-demand writing tests administered at grades 4, 7, and 12.*

### Student Response

The author says that the decrease in use of dial clocks will change the learning of counting. The authors also says that locating things in the scky or around you because you can't say things like: the house is at 9'o'clock. The fractions for people will change.

Student attempts to identify an argument from the article (i.e., the learning of counting), but it reflects a lack of understanding of one of the author's arguments.

Student generally discusses one argument from the article (i.e., direction).

Student attempts to identify an argument from the article (i.e., fractions), but it is too vague to count as one of the author's arguments.

Overall, the student demonstrates limited knowledge of the text and a limited ability to identify key arguments in the text. The student generally discusses one argument that the author uses to try to convince the reader that dial clocks are better than digital. The student attempts to discuss two additional arguments but they are either incorrect (i.e., the learning of counting) or too vague (i.e., fractions).

## Annotated 1-Point Student Response

*An effort has been made to reproduce the sample student papers as closely as possible to the original handwritten copy, including any grammatical errors in usage. Scores are given based on evidence of relevant content knowledge only. Spelling and grammatical errors have no impact on scores as long as the response is understandable. Writing skills such as spelling and grammar are evaluated as one component of holistic scoring in on-demand writing tests administered at grades 4, 7, and 12.*

### Student Response

The reason dial clocks are better then digital clocks is is that when you have power shortage or something the your digital clocks will go out and you won't have a way to tell time.

The Sumerians used 60 because they could divide into many different ways considering the fact that they weren't very well with fraction. Now that we are here we have evolved from this and made a dial clock which tells time. The way we used it is is we made it to where there is 60 minutes in an hour.

The reason some children that are babies will not be able to look at a dial clock is because we are making more and more digital clocks every day. When they get older there probaly will not be any dial clocks.

Student attempts to give an argument why dial clocks are better than digital clocks, however it is incorrect.

Student includes some information from the passage (i.e., why the Sumerians chose to use the number 60), but it does not relate to the question.

Student offers more discussion relating to the number 60, but it reveals a lack of understanding of the passage (i.e., that we use the number 60 in a more evolved way than the Sumerians did).

Student includes more information from the passage that does not answer the question.

Overall, the student demonstrates minimal knowledge of the text and minimal ability to identify and explain key arguments in the text. Although not acceptable toward an answer to the question, the student does include some accurate and relevant information from the passage in the response. The incorrect information provided in the response is ignored in scoring because, except at the "4" level, incorrect information does not count against the student's score. Therefore, because the response is not totally incorrect or totally irrelevant, it receives a score of "1."

## Instructional Strategies

The open-response question for *Dial Versus Digital* was designed to assess students' ability to (1) make sense of the variety of materials they read, (2) identify the argument and supporting evidence, and (3) identify commonly used persuasive techniques. The instructional strategies below present ideas for helping students explore and master these concepts.

Provide opportunities for students to work individually, in pairs, in small groups, and/or as a class to complete (with teacher guidance and support) any or all of the following activities:

- Fold a piece of paper in half lengthwise. Label the left section of the paper “Reasons” and the right section of the paper “Evidence.” Read the article *Dial Versus Digital*. As you read, make a note of each reason and a note for the evidence that Isaac Asimov gives in his argument that dial clocks are better than digital clocks.
- Write a journal entry describing the persuasive technique(s) Asimov uses in this article. Explain how writers of persuasive writing intend to appeal to both the intellect and emotions of the reader. Commonly used persuasive techniques are expert opinion, statistics, testimonial, bandwagon, etc.
- Research digital clocks. Look for information that would help you argue against Asimov’s opinion that dial clocks are better than digital clocks. Make a “Reasons” and “Evidence” chart to organize your notes. Use your research information and your knowledge of persuasive techniques to write an article that argues that digital clocks are better than dial clocks.
- Locate a persuasive article and make a copy of it. As you read the article, circle the facts with a blue pen and circle the opinions with a red pen. Write a journal entry explaining the difference between a fact and an opinion.
- Think about how persuasion is used to get your age group to do something, not do something, use a particular product, go to an event, etc. Record your thoughts on a mind map.
- Brainstorm a list of how kids your age try to persuade others (peers, parents, teachers, etc.) to agree with their point of view. Write a journal entry of how you successfully or unsuccessfully persuaded someone to agree with your point of view.

- Locate media or print examples of three different persuasive techniques. Select the best example and make a presentation to your class. Identify the persuasive technique(s) used and explain why you think this example is the best in your collection.
- Write a persuasive letter to someone older than you. This could be to your parents, your teacher or principal, a politician, etc.

## Memory: Magic through Association

REPETITION AND REVIEW are powerful ways to burn information into your memory. Adding another technique—association—can make memorizing even easier and more fun.

Following are some ways to use association. You may find that some techniques work better for you than others. As always, experiment.

### ♦ *CONNECT THE MATERIAL TO YOUR INTERESTS*

We tend to remember material that aligns with our interests. If the subject you're learning seems outside your interests, then search for an interesting connection. For example, perhaps you can relate American history to the development of jazz and rock music. Someone who loves cars can connect several areas in physics to automobiles.

### ♦ *GO FOR UNDERSTANDING*

It's usually easier to remember material that you understand. It's easier for a baseball fan to remember the scores of today's games than it is for someone who doesn't know the difference between home base and a home run. So before you start to memorize something, do whatever it takes for you to understand it. Talk to another student. See your teacher. Review that material with a parent or family member. Know what problem this material helps you solve, and ask how you would apply this material outside of class. Go for the big picture. Understand the rules before the exceptions. Organize the material by outlining or drawing a mind map. Understanding is especially important in math and science, where it's easy to confuse formulas and how to apply them.

### ♦ *USE MNEMONICS*

This word is pronounced as though it were spelled nemoniks. A mnemonic is a play on words that helps you to remember something. The following jingles offer examples: Thirty days have September, April, June and November. All the rest have 31, except for February, the second one. . . "i" before "e" except after "c," or when sounded like "a" as in "neighbor" and "weigh." Remember that you can make up your own poem, rap, or jingle.

### ♦ *SET A MEMORY TRAP*

Say that it's Monday and you want to remember to call your Aunt Margaret on Tuesday. So, tie a string around your little finger. At the same time, make a mental note: Tomorrow, when I see this string on my finger, that will remind me to call my Aunt.

During Tuesday morning's shower, you might notice a long white hair growing out of your hand. You try to pluck it out and you'll discover it's actually the string you tied to yourself on Monday. Yo, you say to yourself, as soon as I'm dry it's time to get on the horn. There are hundreds of other ways to set memory traps. Instead of tying a string to



your finger, switch your watch to the other wrist. Tie a rubber band around your wrist. Move a ring to a different finger. Or set an alarm as a cue to do something; many wrist watches offer this feature.

◆ *USE ACRONYMS*

An acronym is a word formed by the first letters in a series of other words. For example, NASA is an acronym for the National Aeronautics and Space Administration. Another acronym is the word HOMES, used to remember the names of the Great Lakes: Huron, Ontario, Michigan, Erie, Superior. Again, there's no need to stick with the old standbys. You can create your own acronyms.

The author offers many useful methods to remember information.

- a. Identify **three** methods from the article that can be used to remember information.
- b. Explain how **each** of these methods can help you to improve your memory.

**Academic Expectation:** 1.2 “Students make sense of the variety of materials they read.”

**Core Content Code:** 4.0.11 “Locate and apply information for a specific purpose (e.g., following directions, completing a task).”

**Core Content Code:** 4.0.9 “Reflect on and evaluate what is read.”

## *Memory: Magic through Association*

### Scoring Guide

SCORE	DESCRIPTION
4	Student identifies three methods from the article that can be used to remember information and clearly explains how each method can help to improve memory.
3	Student identifies three methods from the article that can be used to remember information and generally explains how each method can help to improve memory. <b>OR</b> Student identifies two methods from the article that can be used to remember information and clearly explains how each method can help to improve memory.
2	Student identifies three methods from the article that can be used to remember information with no explanation of how they can help to improve memory. <b>OR</b> Student identifies two methods from the article that can be used to remember information and gives a limited explanation of how each method can help to improve memory. <b>OR</b> Student identifies one method from the article that can be used to remember information and generally explains how this method can help to improve memory.
1	Student demonstrates minimal understanding (e.g., student identifies one method from the article that can be used to remember information with limited or no explanation of how it can help to improve memory).
0	Student's response is totally incorrect or irrelevant.
Blank	No student response.

#### **Methods from the article to remember information:**

- Connect the material to your interests (make associations with what you know).
- Go for understanding.
- Use mnemonics.
- Set a memory trap.
- Use acronyms.

## Annotated 4-Point Student Response

An effort has been made to reproduce the sample student papers as closely as possible to the original handwritten copy, including any grammatical errors in usage. Scores are given based on evidence of relevant content knowledge only. Spelling and grammatical errors have no impact on scores as long as the response is understandable. Writing skills such as spelling and grammar are evaluated as one component of holistic scoring in on-demand writing tests administered at grades 4, 7, and 12.

In the level “4” student response below, up to three errors related to writing skills are highlighted with light gray shading. These errors have no impact on scoring because the response is understandable.

### Student Response

a. Three methods of from the article that can be used to remember information are use acronyms, set a memory trap, and mnemonics.

b. Each of the methods are really helpful in the course of improving your memory. Acronyms are words formed by the first letters in a series of other words. They allow you to remember the a word that involves the letters of the things you want to memorize. For example, I might want to memorize the great lakes. HOMES will stand for the first letter of each one. Memory traps

H (Huron)	are also helpful. To
O (Ontario)	use these you change
M (Michigan)	something about
E (Erie)	yourself like your
S (Superior)	watch or a ring to
	remind yourself to
	do something. I
	often write a note
	on my hand. When I

see I have something on my hand, I will read it and remember what I was supposed to do. Mnemonics are also helpful. To use these create a short poem and tie information in. An example would be "in 1492 Columbus sailed the ocean blue." This poem will make it easy to remember that one, small piece of information. There are many other ways to remember information. How you do memorize it, though, is up to you.

Student identifies three methods from the article that can be used to improve memory.

Student clearly explains how the first method (i.e., acronyms) can help improve memory.

Student clearly explains how the second method (i.e., memory traps) can help improve memory.

Student clearly explains how the third method (i.e., mnemonics) can help improve memory.

Overall, the student demonstrates an in-depth understanding of the text. The student presents three methods from the article that can be used to remember information and clearly explains how each one can help to improve memory.

## Annotated 3-Point Student Response

*An effort has been made to reproduce the sample student papers as closely as possible to the original handwritten copy, including any grammatical errors in usage. Scores are given based on evidence of relevant content knowledge only. Spelling and grammatical errors have no impact on scores as long as the response is understandable. Writing skills such as spelling and grammar are evaluated as one component of holistic scoring in on-demand writing tests administered at grades 4, 7, and 12.*

### Student Response

Do you ever need to do something, but then you forget. Well Idol, and these topics help you learn not to. You could use Acronyms like HOMES to remember the Great Lakes, or you could learn to understand the topic you have chosen before you memorize it.

One way you can remember things is to set a mind trap. Like the old tie a string around your finger. This procedure will help you remember what you need to do. The second procedure is to connect the materials to your interests. If you are doing Math or Algebra you can use your knowledge about sales tax and precents from your local mall. Another procedure is Mnemonics like I before e except after c. These things help you learn by using a rhyme or jingle to a process.

Sometimes when I go to my friends house I forget to call mom. So all I do is draw a telephone on my hand so I can remember.

These are some procedures you can take to boost up your memory and remember alot better.

Student identifies two methods from the article that can be used to remember information (i.e., acronyms, go for understanding).

Student provides a limited explanation of how a third method (i.e., memory trap) can help improve memory.

Student generally explains how the method “go for understanding” can help improve memory.

Student generally explains how the method “mnemonics” can help improve memory.

Student gives an example that clarifies how the method “memory trap” can help improve memory.

Overall, the student demonstrates strong knowledge of the text. The student presents three methods from the article that can be used to remember information and generally explains how each method can help to improve memory. Because the student discusses the memory trap method at the beginning and again at the end of the response to part b, the explanation for how that method can help to improve memory is in two parts. Taken together, the two parts become a general explanation that provides evidence of the student’s understanding of memory trap from the article.

## Annotated 2-Point Student Response

*An effort has been made to reproduce the sample student papers as closely as possible to the original handwritten copy, including any grammatical errors in usage. Scores are given based on evidence of relevant content knowledge only. Spelling and grammatical errors have no impact on scores as long as the response is understandable. Writing skills such as spelling and grammar are evaluated as one component of holistic scoring in on-demand writing tests administered at grades 4, 7, and 12.*

### Student Response

In the story "Memory: Magic through Association." They explain three ways to not forget your memory. Here are some ways, tie a string around your finger. That will help you to remember to call or do something the next day. You could move a ring to another finger or switch your watch to the other hand. All of these techices will show you how to remember to do something this is an excallent memory thing maybe you should try it.

Student identifies one method from the article that can be used to remember information (i.e., memory trap) and clearly explains how it can help improve memory.

Overall, the student demonstrates a limited understanding of the text. The student presents one method from the article that can be used to remember information and clearly explains how it can help to improve memory. In the explanation, the student includes three examples (i.e., tie a string around your finger, move a ring to another finger, move your watch to the other hand), all of which relate to a single method from the article.

## Annotated 1-Point Student Response

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### Student Response

The first method is Connect The Material To Your Interests because the subject seems to outside you interest in the subject.

The next one is one that remember things good the way is to uderstand the things you are trying to remember so it can be easier to remember.

Student identifies one method from the article (i.e., connect what you want to remember to one of your interests).

Student identifies another method from the article (i.e., understand the things you are trying to remember) with a limited explanation.

Overall, the student demonstrates minimal understanding of the text. The student presents two methods from the article that can be used to remember information. The attempted explanation for the first method is too unclear to receive credit. The explanation for the second method is limited because it merely states that the method makes it easier to remember.

## Instructional Strategies

The open-response question for *Memory: Magic through Association* was designed to assess students' ability to (1) make sense of the variety of materials they read, (2) locate and apply information for a specific purpose, and (3) reflect on and evaluate what is read. The instructional strategies below present ideas for helping students explore and master these concepts.

Provide opportunities for students to work individually, in pairs, in small groups, and/or as a class to complete (with teacher guidance and support) any or all of the following activities:

- Read the article and create a graphic organizer of the memory techniques described in the article *Memory: Magic through Association* and how you can apply these techniques in your life.
- Select one of the memory techniques presented in the article that you can use in your life. Try it out and then write a journal entry about your experience.
- Make an appointment to help third or fourth graders memorize math facts, study for a spelling test, or some other memory task they have. Explain what memory techniques are and help them apply a memory technique to something they need to memorize.
- Locate three or four examples of written items that help the reader learn to do a specific task. These can be in the form of articles, letters, memos, brochures, electronic texts, warranties, recipes, forms, consumer texts, manuals, schedules, or directions. Scan them and read the example that you are most interested in. Write a journal entry comparing the item you picked and the article *Memory: Magic through Association*.
- Watch a “how to” program on television: how to cook, paint, ski, fish, sew, travel, etc. Make a mind map of the program as you watch it. Write up the instructions given in the program. Get feedback on your written instructions from your response group. Using the feedback, refine your instructions.
- Collect examples of as many Practical/Workplace reading materials as you can find during a month. Organize these examples by type. Use this collection to develop a class presentation. Compare the different formats used in your collection.

- Read the instructions for how to set up a VCR/DVD player or how to preset the radio stations on your family's car radio, or find some other item in your life where you need to follow written instructions to do something. Read the material to get a general idea of how the information is organized. Lightly underline anything you don't understand. Circle any words you don't know. Reread the parts you underlined and look up the words you circled. If you can't find the definitions of the circled words in a dictionary, ask for help. Read the material again and then do the task. Refer back to the instructions if you need to. Make a journal entry of your experience in following the instructions. Note what helped you understand the material and make suggestions about how to make the instructions easier to follow.





## **Grade 7**

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## **Science**

# SCIENCE

## *Newton's Laws of Motion*

The brakes on a truck fail as it approaches a car stopped at a red light. Use Newton's first two laws of motion to explain what will happen when the truck collides with the car.

### **Newton's Laws of Motion**

**1st Law:** An object will stay in place until it is pushed or pulled; an object that is moving will keep moving in a straight line until it is pushed or pulled to change its speed and/or direction.

**2nd Law:** The more an object is pushed or pulled, the faster its speed and/or direction changes; the more massive an object is, the more resistance it has to change its speed and/or direction.

**Academic Expectation:** 2.2 “Students identify, analyze, and use patterns such as cycles and trends to understand past and present events and predict possible future events.”

**Core Content Code:** 1.2.3 “When an unbalanced force acts on an object, the change in speed and/or direction depends on the size and direction of the force.”

**Core Content Code:** 1.2.2 “An object remains at rest or maintains a constant speed and direction of motion unless an unbalanced force acts on it.”

## *Newton's Laws of Motion*

### Scoring Guide

SCORE	DESCRIPTION
4	Using both of Newton's Laws of Motion, student clearly explains what will happen when the truck collides with the car.
3	Using both of Newton's Laws of Motion, student generally explains what will happen when the truck collides with the car.
2	Using both of Newton's Laws of Motion, student gives a limited explanation of what will happen when the truck collides with the car. <b>OR</b> Using one of Newton's Laws of Motion, student generally explains what will happen when the truck collides with the car.
1	Student demonstrates minimal understanding (e.g., student explains what will happen when the truck collides with the car but does not use Newton's Laws of Motion).
0	Student's response is totally incorrect or irrelevant.
Blank	No student response.

### Answer Information

**Newton's 1<sup>st</sup> Law of Motion:** The car will remain at rest until the truck hits it, and the truck will keep going until it hits the car.

**Newton's 2<sup>nd</sup> Law of Motion:** The effect of the collision on the car and truck would depend on their relative masses. Since the truck has greater mass than the car, it will not stop immediately when it hits the car, but it will slow down, and/or change direction depending on the angle of the impact. The car at rest will be set in motion by the force of the truck.

## Annotated 4-Point Student Response

An effort has been made to reproduce the sample student papers as closely as possible to the original handwritten copy, including any grammatical errors in usage. Scores are given based on evidence of relevant content knowledge only. Spelling and grammatical errors have no impact on scores as long as the response is understandable. Writing skills such as spelling and grammar are evaluated as one component of holistic scoring in on-demand writing tests administered at grades 4, 7, and 12.

In the level “4” student response below, up to three errors related to writing skills are highlighted with light gray shading. These errors have no impact on scoring because the response is understandable.

### Student Response

Newton's first two laws would come into play with the collision. The first law states: An object at rest will remain at rest until acted on.... (This would be the car at rest until hit by the truck) and an object will continue to move or stay in motion until acted on... (the truck keeps going until stopped or slowed by the car).

Newton's second law states: "The more an object is pushed or pulled, the faster its speed/direction changes.... (the car is pushed by the truck. It goes forward, rapidly accelerating when hit.) and the more massive an object is, the more resistance it has to **change** its speed or direction (this applies to the truck, which has greater mass than the car. This means because the truck is bigger, it will only slow down a little when it hits the car. It will not stop immediately.)

Student clearly explains what will happen when the truck hits the car, based on Newton's 1st law of motion (i.e., the car will remain at rest until hit by the truck and the truck keeps going until stopped or slowed by the car).

Student clearly explains what will happen when the truck hits the car, based on Newton's 2nd law of motion (i.e., the car is pushed by the truck. It goes forward, rapidly accelerating when hit).

Overall, the student demonstrates appropriate understanding of Newton's laws of motion and the ability to apply the laws to a scenario of an impending collision between a truck and a car. Using both of Newton's laws of motion, the student clearly explains what will happen when the truck collides with the car.

## Annotated 3-Point Student Response

*An effort has been made to reproduce the sample student papers as closely as possible to the original handwritten copy, including any grammatical errors in usage. Scores are given based on evidence of relevant content knowledge only. Spelling and grammatical errors have no impact on scores as long as the response is understandable. Writing skills such as spelling and grammar are evaluated as one component of holistic scoring in on-demand writing tests administered at grades 4, 7, and 12.*

### Student Response

Newton's 1st law of motion states that if an object wishes to move in a straight line, it may continue to do so. Well, same withe this truck. It has lost it's brakes & is headed right for the car @ the stoplight in front of him. As he hits the car, what happens?...

When the truck hits the car, the car will suddenly go forward, leaving the truck at a slower speed. The car & truck driver will be jerked back, as if having whiplash. The trucks direction, though, does not change. When the truck slows, it doesn't slow that greatly, because it is massive.

I hope that this explains what happened to the truck by using Newton's 1st & 2nd laws!

Student introduction does not include any information required by the question; therefore this first paragraph does not count toward the student's score.

Student generally explains what will happen when the truck hits the car, based on both of Newton's laws of motion (i.e., the car will suddenly go forward, leaving the truck at a slower speed; the truck's direction does not change; the truck doesn't slow greatly because it is massive).

Overall, the student demonstrates a general understanding of Newton's laws of motion and an ability to apply the laws to a scenario of an impending collision between a truck and a car with some omissions. While the student refers to both of Newton's laws of motion and explains some of what will happen when the truck collides with the car, the link to Newton's laws of motion is not clear or explicit. The student neglects to say that the car will remain *at rest* until the truck hits it. Further, the reference to the truck's mass is appropriate, but would be clearer with a statement comparing the relative masses of the two vehicles.

## Annotated 2-Point Student Response

An effort has been made to reproduce the sample student papers as closely as possible to the original handwritten copy, including any grammatical errors in usage. Scores are given based on evidence of relevant content knowledge only. Spelling and grammatical errors have no impact on scores as long as the response is understandable. Writing skills such as spelling and grammar are evaluated as one component of holistic scoring in on-demand writing tests administered at grades 4, 7, and 12.

### Student Response

This event is using Newton's first law by the truck is moving in a straight line wishing to do so and the car is remaining still.

The Event is using Newton's second law by The truck being very massive and it can't change it's direction or speed in a quick manner so when it collides into the car the truck will push the car forward changing it's speed.

Student applies Newton's 1st law of motion to the scenario before the truck hits the car (i.e., the truck is moving in a straight line, the car is remaining still).

Student gives a limited explanation of what will happen when the truck hits the car, based on Newton's 2nd law of motion (i.e., the truck will push the car forward, changing its speed).

Overall, the student demonstrates a limited understanding of both of Newton's laws of motion and some ability to apply the laws to a scenario of an impending collision between a truck and a car with significant omissions. The student is able to draw a parallel between the scenario and Newton's 1st law of motion *before the collision* only. The student applies Newton's 2nd law of motion to the speed of the car but does not address how the collision will affect the speed or direction of the truck. On the whole, the student provides a limited explanation that is based on both of Newton's laws of motion.

## Annotated 1-Point Student Response

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### Student Response

By using the first two of Newton's laws of motion my results were that the truck was going ram into the car and making increase in speed and it could make change in direction. The truck will stay in a strait line the whole time.

Student gives a limited explanation of what will happen when the truck hits the car, based on Newton's 2nd law of motion (i.e., the truck makes the car increase in speed and could make it change in direction).

Overall, the student demonstrates minimal understanding of Newton's laws of motion and demonstrates a limited ability to apply the laws to a scenario of an impending collision between a truck and a car. The student gives a limited explanation of what will happen when the truck collides with the car, using only one of Newton's laws of motion.

## Instructional Strategies

The open-response question *Newton's Laws of Motion* was designed to assess students' (1) understanding of Newton's first and second laws of motion and (2) ability to apply Newton's first and second laws of motion and predict outcomes in a practical situation. The instructional strategies below present ideas for helping students explore and master these concepts.

Use episodes of the *Eureka* video series<sup>1</sup> as introductions or summaries for discussions about Newton's laws of motion.

Download the Thinker Tools lab and computer activities.<sup>2</sup> Use part or all of the lab activities and computer models based on Newton's laws.

Provide opportunities for students to work individually, in pairs, in small groups, and/or as a class to complete (with teacher guidance and support) any or all of the following activities:

- View *Road Runner* video cartoons that show Newton's laws being applied and broken. Pause the video each time a law is used or broken and ask students to identify which ones are involved.
- Have a show-and-tell day of inertia tricks, such as:<sup>3</sup>
  - Push a test tube containing a marble across the desk. Stop the test tube and watch the motion of the marble.
  - Pull a tablecloth out from under a setting of dishes.
- Make frictionless pucks from old CDs, sports bottle mouthpieces, and a balloon.<sup>4</sup>
- Fill tennis balls with sand in order to have balls of even mass multiples for activities investigating force and collision.

<sup>1</sup> *Eureka* video series, produced by Ontario TV.

<sup>2</sup> Thinker Tools, <http://thinkertools.soe.berkeley.edu/Pages/force.html> is a free curriculum based on the inquiry cycle covering Newton's laws, gravity, and projectile motion.

<sup>3</sup> *Conceptual Physics* by Paul Hewitt has a large number of these in the text and question sections.

<sup>4</sup> For complete directions, see [http://www.exo.net/~pauld/activities/frictionless\\_cd\\_puck.html](http://www.exo.net/~pauld/activities/frictionless_cd_puck.html).



## *Changes in Landforms*

Scientists have evidence that the landforms we see on Earth, such as mountains, islands, and canyons, as well as the shapes of continents, are the result of constructive and destructive forces at work over a long period of time.

Describe in detail **two** pieces of evidence that show that landforms on Earth are constantly changing. Provide a specific example for each piece of evidence.

**Academic Expectation:** 2.6 “Students understand how living and nonliving things change over time and the factors that influence the changes.”

**Core Content Code:** 2.1.02 “Landforms are a result of a combination of constructive and destructive forces. Constructive forces include crustal deformation, volcanic eruption, and deposition of sediment, while destructive forces include weathering and erosion.”

**Core Content Code:** 2.2.01 “The Earth’s processes we see today, including erosion, movement of lithospheric plates, and changes in atmospheric composition, are similar to those that occurred in the past. Earth’s history is also influenced by occasional catastrophes such as the impact of an asteroid or comet.”

## *Changes in Landforms*

### Scoring Guide

SCORE	DESCRIPTION
4	Student clearly describes, in detail, two pieces of evidence that show that landforms on Earth are constantly changing. A specific example is given for each piece of evidence.
3	Student generally describes two pieces of evidence that show that landforms on Earth are constantly changing. A specific example is given for at least one piece of evidence.
2	Student provides a limited description of two pieces of evidence that show that landforms on Earth are constantly changing. Examples may or may not be given. <b>OR</b> Student generally describes one piece of evidence that shows that landforms on Earth are constantly changing. A specific example is given for this piece of evidence.
1	Student demonstrates minimal understanding (e.g., student provides a limited description of one piece of evidence that shows that landforms on Earth are constantly changing, <b>or</b> student names an example of a specific landform or type of landform that changes but does not describe how this provides evidence that landforms on Earth are constantly changing).
0	Student's response is totally incorrect or irrelevant.
Blank	No student response.

**Note:** The question asks for evidence that landforms are constantly changing. It does not distinguish between slow change over time and rapid change—either is acceptable.

**Examples of evidence that shows that landforms on Earth are constantly changing (and some specific examples of the evidence):**

- Shapes of continents “fitting” from the breakup of Pangea (shape of Africa fits with shape of South America)
- Fossil distribution of the same species across continents as evidence of plate movement (similar dinosaurs existed on several continents)
- Mountain building as a result of plate movement pressures—different ages of mountain ranges as shown by erosion shapes (old Appalachians vs. young Rockies)—uplift measured by modern satellites (such as change in height of Mt. Everest, rise of Santa Monica Mountains by over a foot in Northridge earthquake)
- Tectonic activity at plate boundaries (the “Ring of Fire” in the Pacific)
- New surface created by lava flows from active volcanoes (many recent examples, also historical ones such as Vesuvius burying Pompeii)
- New volcanic island formation (near Iceland)
- Water erosion resulting in river delta formation (Mississippi), canyon formation (Grand Canyon), changes in the course of rivers (many examples including rivers in KY), and cave formation (Mammoth Caves, including recent changes as well as former)
- Wind-caused sand dune movement (Sahara Desert changes, White Sands dunes), natural arch formation (in deserts in Utah and Arizona, and by water and wind at Natural Bridge)
- Magnetic variations found along the sea floor (magnetic striping and polar reversals along mid-ocean ridges)

Many alternative specific examples can be cited.

## Annotated 4-Point Student Response

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In the level “4” student response below, up to three errors related to writing skills are highlighted with light gray shading. These errors have no impact on scoring because the response is understandable.

### Student Response

Land forms on Earth are constantly changing in many ways. For example: the process of Erosion. If there is a mountain with lose pieces of rock on it, when it rains the rain water is going to wash downward breaking away bits of rock as it flows.

Another change we have experienced in the past, and are still experiencing is Plate Techtonics. Plate Techtonics is how the Earth's continents have shifted over the years. A long time ago there was one big continent called the Pangea. But over time parts of the Pangea have broken off and moved away which have formed the continents we see today. But a little at a time the continents are still shifting.

Student clearly describes one piece of evidence that shows that landforms on Earth are constantly changing (i.e., erosion) and clearly describes a specific example (i.e., a mountain with loose rocks).

Student clearly describes a second piece of evidence that shows that landforms on Earth are constantly changing (i.e., plate tectonics) and clearly describes a specific example (i.e., Pangea).

Overall, the student demonstrates appropriate understanding of how landforms change. The student clearly describes two pieces of evidence that show that landforms on Earth are constantly changing. A specific example, with details, is given to support each piece of evidence.

## Annotated 3-Point Student Response

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### Student Response

Several years ago the creek at my ants wasnt to very wide but it was deeper and the creek did not dry up in some places.

Now when I go to the creek it is wider and the water highness has gone down. The reason the creek is wider is because water carry away dirt small portions at a time. The other reason the water leval has gone down is because when the creek gets wider it allows the water to spread.

Another landform that is constantly changing is landplates. Landplates are under the earth's surface when they scoot across each other they make volcanoes explode just like Mt Saint Helens did back in the 80's.

There are two pieces of evidence that I know landforms are changing.

Student clearly describes one piece of evidence that shows that landforms on Earth are constantly changing (i.e., erosion) and generally describes a specific example (i.e., creek).

Student generally describes a second piece of evidence that shows that landforms on Earth are constantly changing (i.e., tectonic plates) and identifies a specific example (i.e., Mount St. Helens).

Overall, the student demonstrates a general understanding of how landforms change. Student generally describes two pieces of evidence that show that landforms on Earth are constantly changing. The student includes a minor error by inferring that all tectonic plates are below the Earth and cause volcanoes to explode when they shift.

## Annotated 2-Point Student Response

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### Student Response

Two pieces of evidence that shows that landforms on Earth are constanly changing are erosion because on hills land has fallen off in the result of mud slides and rock fallings. Another one is that the tectonic plates are moving, they are either pushing together or pulling apart.

Student provides a limited description of one piece of evidence that shows that landforms on Earth are constantly changing (i.e., erosion) and gives no example.

Student provides a limited description of a second piece of evidence that shows that landforms on Earth are constantly changing (i.e., tectonic plates) and gives no example.

Overall, the student demonstrates a limited understanding of how landforms change. The student provides a limited description of two pieces of evidence that show that landforms on Earth are changing, with no specific examples.

## Annotated 1-Point Student Response

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### Student Response

Are the landforms on earth really constantly changing? Here are some ways to see how and if it really is.

Landforms on earth are really constantly changing. For example: the earth's constantly changing because new things are happening such as new buildings being built. Also land forms are too there is less trees, flowers, animals, and the mountains seem taller or in some places smaller.

The astronauts say that the earth (world) and sun are getting closer also smaller or larger. The canyons are getting wider and deeper within years.

On earth there are more or less people and more or less factories. (buildings)

The islands are getting either smaller or larger by the years. The continents are changing their shape and size in most countries on the maps or on t.v. (television).

So there for landforms and earth are really changing. The landforms, earth, sun, continents, canyons, islands, and different things are changing.

Student demonstrates minimal understanding of changing landforms (i.e., new buildings being built).

Student provides a limited description of some possible changes in landforms without specific examples (i.e., canyons are getting wider and deeper, islands are getting either smaller or larger, continents are changing their shape).

Overall, the student demonstrates minimal understanding of how landforms change and demonstrates ineffective use of evidence. Student does not address the fundamental question of geological change in landforms.

## Instructional Strategies

The open-response question *Changes in Landforms* was designed to assess students' (1) understanding of how landforms are changing and (2) ability to describe evidence that landforms are changing. The instructional strategies below present ideas for helping students explore and master these concepts.

Provide opportunities for students to work individually, in pairs, in small groups, and/or as a class to complete (with teacher guidance and support) any or all of the following activities:

- Discuss the causes of local geological formations such as caves, sinkholes, and coal deposits. Were they produced by constructive or destructive forces? Have these geological processes stopped or are they continuing?
- Make a class collage of as many landforms as possible. Cut out photographs of different landforms, identify where they are located, explain how they were formed, and describe how they may change in the future.
- Map the hypothetical movement of soil eroded from a Kentucky farm through local streams, the Ohio River, the Mississippi River, and finally to the Mississippi Delta in the Gulf of Mexico.
- Make a gelatin volcano erupt, producing fissures, dikes, and side vents.<sup>1</sup>
- Use a stream table to show delta formation, stream meandering, lake formation, and the relationship of slope to erosion and water flow.
- Watch computer animations of the breakup of Pangea.<sup>2</sup>
- Watch part or all of “The Living Machine,” a clear history of the evidence that leads to the current understanding of sea floor spreading and plate tectonics.<sup>3</sup>

<sup>1</sup> Complete directions and photos of this activity are at [http://www.spacegrant.hawaii.edu/class\\_acts/GelVolTe.html](http://www.spacegrant.hawaii.edu/class_acts/GelVolTe.html).

<sup>2</sup> Among sites available is the US Geological Survey animation at <http://wrgis.wr.usgs.gov/docs/parks/pltec/pangea.html>.

<sup>3</sup> “The Living Machine,” vol.1, from *The Planet Earth*, available from PBS.



## *Extinction*

A species may become extinct if environmental changes occur and the species does not adapt quickly enough to the changes.

- a. Identify an environmental change that might cause a species to become extinct **and** identify a species that would likely be affected by such a change.
- b. Describe how extinction of one species can affect other organisms in the ecosystem.

**Academic Expectation:** 2.6 “Students understand how living and nonliving things change over time and the factors that influence the changes.”

**Core Content Code:** 3.4.2 “Extinction of a species occurs when the environment changes and the adaptive characteristics of a species are insufficient to allow its survival. Extinction of species is common; most of the species that have lived on Earth no longer exist.”

## *Extinction*

### Scoring Guide

SCORE	DESCRIPTION
4	Student identifies an environmental change that might cause a species to become extinct and a species that would likely be affected by such a change. Student clearly describes how extinction of one species can affect other organisms in the ecosystem.
3	Student identifies an environmental change that might cause a species to become extinct and a species that would likely be affected by such a change. Student generally describes how extinction of one species can affect at least one other organism in the ecosystem.
2	Student identifies an environmental change that might cause a species to become extinct and a species that would likely be affected by such a change. Response to part b is incorrect or missing. <b>OR</b> Student identifies an environmental change that might cause a species to become extinct, but fails to identify a species that would be affected. Student provides a limited description of how the extinction of one species can affect at least one other organism in an ecosystem. <b>OR</b> Student generally describes how extinction of one species can affect other organisms in the ecosystem. Response to part a is incorrect or missing.
1	Student demonstrates minimal understanding (e.g., student identifies an environmental change that might cause a species to become extinct, but does not identify a species that could be affected by an environmental change or describe how extinction of one species can affect other organisms in the ecosystem).
0	Student's response is totally incorrect or irrelevant.
Blank	No student response.

#### Notes:

- Because the question specifies species extinction, answers that focus on a change in the environment of an individual organism are not acceptable.
- The species described in part b does not have to be the same as that named in part a.

## **Answer Information**

### **Part a:**

Environmental changes involve human destruction of habitat by development or agriculture (e.g., destruction of rainforest, other forests), and many species particular to a habitat could be named. Two examples are the reduction in quality and quantity of habitat of cheetahs or tigers. Environmental changes could be induced by catastrophic events such as asteroid impact, volcanoes, oil spills, etc., that destroy habitat. Other natural changes may involve weather or climate changes, including global warming, extensive flooding, melting of glaciers or polar ice caps, etc. Other changes are induced by the introduction of non-native competitive species that compete too effectively for resources. Over-exploitation by humans (e.g., fishing for cod or salmon, hunting for whales) could also be considered a change in the environment. Pollution, such as acid rain, could also cause extinction of species that cannot adapt quickly or move to less polluted environments.

### **Part b:**

Extinction of a species can interrupt the natural food chain or web by removing either prey (such as a mouse) or a predator (such as an owl). If a producer (e.g., some type of bush or plant) becomes extinct, this affects the entire food system that depended on that species for food.

## Annotated 4-Point Student Response

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In the level “4” student response below, up to three errors related to writing skills are highlighted with light gray shading. These errors have no impact on scoring because the response is understandable.

### Student Response

If the world, let's just say unrealistically, lost all of its natural watersource, that would be a huge enviromental change, and a lot of species would be affected by it. One species that would probably become extinct is the common, every day salmon, just as an example. If it became extinct or had very few numbers in population, then a lot of other organisms would be affected.

You see when an animal becomes extinct, two things happen. One, the animal that used to prey on the extinct one wold become very few. Two, the extinct animal's prey would become much higher in number.

It's all a process of give and take.

Student identifies an environmental change that might cause a species to become extinct (i.e., depletion of water) and a species that would likely be affected by such a change (i.e., salmon).

Student clearly describes how extinction of one species can affect other organisms in the ecosystem (i.e., loss of food supply for predators and increase of prey species).

Overall, the student demonstrates appropriate knowledge of the concept of extinction, including how the extinction of one species can affect other organisms in the ecosystem.

## Annotated 3-Point Student Response

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### Student Response

A. An environmental change, such as people cutting down trees in the rainforest would have a very large affect on toucan birds. Trees in the rainforest are their homes. By cutting down the trees, it would leave the birds with no homes, which would eventually kill them all.

B. By the extinction of toucan birds, many changes would be made in the ecosystem. Predators who lived by eating toucans would also become extinct from starvation. There would be hardly no decrease in the amount of animals in which the toucan survived on.

Student identifies an environmental change that might cause a species to become extinct (i.e., clear-cutting rainforest) and a species that would likely be affected by such a change (i.e., toucan).

Student generally describes how extinction of one species can affect at least one other organism in the ecosystem (i.e., predators would become extinct, animals on which the toucan survived would not decrease).

Overall, the student demonstrates general knowledge of the concept of extinction and how the extinction of one species can affect other organisms in the ecosystem. The response includes a minor error when claiming that the extinct animal's predator would necessarily become extinct itself. This would only be the case if the extinct animal were the predator's only food source. A second error is the inference that toucans survive on some kind of animal, when toucans eat fruit. The statement, "There would be hardly no decrease in the amount of animals in which the toucan survived on," does reflect some understanding because, in fact, the population of creatures that an extinct animal survived on would increase.

## Annotated 2-Point Student Response

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### Student Response

If there were lakes with fish in them and your climate changed and there was little rain and it was hot the water would evaporate and the lakes would dry up and all of the fish would die.

If one species of an animal dies out it will effect another species because if it relies on that species and it dies out that species will not have nothing to relie on.

Student identifies an environmental change that might cause a species to become extinct (i.e., drying up of lakes) and a species that would likely be affected by a change (i.e., fish).

Student provides a limited description of how the extinction of one species can affect at least one other organism in an ecosystem (i.e., if one species of an animal dies out, a species that relied on it would have nothing to rely on).

Overall, the student demonstrates limited knowledge of the concept of extinction and how the extinction of one species can affect other organisms in the ecosystem. The description of how the extinction of one species can affect other organisms is limited because it addresses only half of the effect of extinction on other organisms (i.e., predator) and does not specify how the predator “relied on” the animal.

## Annotated 1-Point Student Response

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### Student Response

a. If fruits and vegetables stopped growing. An animal that would be affected by that would be the rabbit. If this happened then the rabbit would have to start eating insects and its immune system is not use to that. It would have a seventy-five percent chance of dieing and a twenty-five percent chance of living.

b. Because of the food chain. One thing eats another. If one became extinct, then the animal that eats it would die too. It would go on like that until their was nothing left.

Student erroneously applies concept of adaptation (i.e., rabbits would not start eating insects).

Student provides a limited description of how the extinction of one species can affect at least one other organism in an ecosystem.

Overall, the student demonstrates minimal knowledge of the concept of extinction. However, the student's application of the concept shows some understanding of how the extinction of one species can affect other organisms in the ecosystem.

## Instructional Strategies

The open-response question *Extinction* was designed to assess students' understanding that (1) when an environment changes, many species in the environment are affected and (2) when the adaptive characteristics of a species are insufficient to allow its survival, the species becomes extinct. The instructional strategies below present ideas for helping students explore and master these concepts.

Provide opportunities for students to work individually, in pairs, in small groups, and/or as a class to complete (with teacher guidance and support) any or all of the following activities:

- List natural and human-made environmental changes that have occurred in the local area or state. Describe characteristics that have allowed current species of plants and animals to survive.
- Research local species of plants and animals that are threatened or endangered. What environmental changes have caused them to become less viable? What actions are being taken to protect these species?<sup>1</sup> How has human introduction of nonnative plants and animals that compete with native species impacted their environment?
- Research environmental changes that have happened in the United States that have been beneficial for people but may have caused some plants and animals to become extinct, threatened, or endangered.
- Design a webquest about the characteristics of woolly mammoths. When and where did they live? What was the environment like? Why did they become extinct?<sup>2</sup>
- Play *Predator and Prey* by distributing equal numbers of small pieces of paper in one or more outdoor areas (e.g., lawn, baseball diamond, track area, etc.). Include several different sizes, shapes, and colors of paper. Record the number of pieces of paper found by students in a short period of time in each area by size, shape, and color. Relate results to differences between species and individuals within species.



- Make a *Survivor Species* board game. It should include different options for population changes, adaptation, competition among species for food and territory, and positive and negative environmental changes.

<sup>1</sup> For a list of threatened and endangered species in Kentucky see <http://www.endangeredspecies.com/states/ky.htm>.

<sup>2</sup> Woolly mammoth information can be found on the Internet at <http://www.explorenorth.com/library/weekly/aa032400a.htm>.



## **Grade 7**

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## **Writing**

## **SCORING CRITERIA FOR ON-DEMAND WRITING**

**PURPOSE/AUDIENCE:** The degree to which the writer maintains a focused purpose to communicate with an audience by:

- narrowing the topic to establish a focus
- analyzing and addressing the needs of the intended audience
- adhering to the characteristics (e.g., format, organization) of the form
- employing a suitable tone
- allowing a voice to emerge when appropriate

**IDEA DEVELOPMENT/SUPPORT:** The degree to which the writer develops and supports main ideas and deepens the audience's understanding by using:

- logical, justified, and suitable explanation
- relevant elaboration
- related connections and reflections
- idea development strategies (e.g., bulleted lists, definitions) appropriate for the form

**ORGANIZATION:** The degree to which the writer creates unity and coherence to accomplish the focused purpose by:

- engaging the audience and establishing a context for reading
- placing ideas and support in a meaningful order
- guiding the reader through the piece with transitions and transitional elements
- providing effective closure

**SENTENCES:** The degree to which the writer creates effective sentences that are:

- varied in structure and length
- constructed effectively
- complete and correct

**LANGUAGE:** The degree to which the writer demonstrates:

- word choice
  - » strong verbs and nouns
  - » concrete and/or sensory details
  - » language appropriate to the content, purpose, and audience
- concise use of language
- correct usage/grammar

**CORRECTNESS:** The degree to which the writer demonstrates:

- correct spelling
- correct punctuation
- correct capitalization

## WRITING TASK 1

### SITUATION:

Not only do games have rules, but there are also rules of respect and safety at home and at school. These rules help everyone understand what to do, how and when to do the activities, and how to be safe. Think of a time that you needed to know the rules for an activity. What happened? Why were the rules important? Could someone else learn from your experience? Your school newspaper is running a series of first-person articles about lessons students have learned.

### WRITING TASK:

In an article for your school newspaper, tell about a time when knowing the rules was important.

**Academic Expectation:** 1.11 “Students write using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.”

**Core Content Code:** 1.4 “*Transactive writing* is informative/persuasive writing that presents ideas and information for authentic audiences to accomplish realistic purposes like those students will encounter in their lives.”

**On-Demand Category:** Narrate

## **Annotated Distinguished Student Response**

Due to the small number of students who achieved a performance level of “Distinguished” on this task, an exemplary paper was not identified for release. Please refer to the Kentucky Writing Assessment Holistic Scoring Guide for examples of information that might be included in a “Distinguished” paper.

## Annotated Proficient Student Response

*An effort has been made to reproduce the sample student papers as closely as possible to the original handwritten copy. Holistic scores are given based on the six scoring criteria for on-demand writing (i.e., purpose/audience, idea development, organization, sentences, language, correctness).*

### Student Response

#### "Rules Rule"

Have you ever played a game where rules were an essential part? Have you ever been told to follow the rules, in order to keep things fair? Even though rules sound formidable and boring, they help everybody enjoy the game and play fairly!

A couple of weeks ago I walked into gym class and saw that we were going to play a game called 'Handball.' The coach said it was just like soccer, except you use your hands. It sounded very interesting, so I decided I would take a whack at it! There was only one tiny, ever-so-crucial, little-bitty flaw: I didn't know the rules! The coach seemed to have expertly guessed this, because he sat down and started explaining the rules.

7 people play on a team, and you can't have any fouls, like travels or walks. The goalie can travel however far down the field they want to; but they can't score! Each player is allowed one self-pass each time they have the ball. A self-pass is when you throw the ball up and pass it to yourself; when you can't throw the ball to another player. You score by throwing the ball into a net at the end of the field, which is like a soccer goal. As an added bonus, if each player on the team touches the ball, and you score, your team receives 5 points instead of just 1!

The coach finished talking and divided us up into 2 teams. We ended up playing the game perfectly, and I even managed to score a few goals! The rules that I neglected ended up making the game more fun and fair! Rules help everyone, even though they sound like they wouldn't!

Without handball rules, players would not know how to play the game or even play the game fairly! Rules help equalize and determine how to play the game and have a good time! If we didn't have rules, games wouldn't be much fun and they would scarcely be worth playing! I know everyone of you can relate to my experience. Whether you're playing handball, basketball, or just a game of cards, rules are the most important part on your way to winning the game and having a good time!

This response, an article for a school newspaper about a time when knowing the rules was important, focuses on the purpose and communicates to the student audience two reasons for following rules (i.e., game enjoyment and fairness). Depth of idea development, supported by elaborate and relevant details placed in a meaningful order, is evident. Sentence structure is varied and language is appropriate and effective. There are few errors in spelling, punctuation, or capitalization. This piece portrays "Proficient" characteristics.

## Annotated Apprentice Student Response

*An effort has been made to reproduce the sample student papers as closely as possible to the original handwritten copy. Holistic scores are given based on the six scoring criteria for on-demand writing (i.e., purpose/audience, idea development, organization, sentences, language, correctness).*

### Student Response

Rules can be hard to understand sometimes. But there's a way that you can get to understand rules, like following them and listening. Rules are really important because you may get lost or not understand what are you supposed to do. That's what happened to me. One time when I move from Tennessee to Kentucky I was really excited, but then I start hearing about the CATS test. First I didn't know what was it about but then I start to get what it was all about.

Few months passed and the teachers had say that it was almost time to start testing. First I was really nervous, I thought it was going to be a enormous test and that it was going to be a really hard test. Then it was the big day that the testing was going to start. So when I got to class I didn't know anything so I had to listen to the rules so I wont get lost, and know what was I going to do. The first step was really easy but the rules they kind of mess me up. That was because I didn't really pay enough attention to know what was I doing.

But then the next day it was better, I start to get the rules, but then it start getting harder and harder so this time I have to pay close attention. This time I got to listen very gently to the rules and get to know everything that I need to know to have a great score in the test. So keep in mind that rules can be tricky sometimes.

If you don't know how to do something or don't get what your doing, ask your teacher or pay more attention to rules. I hope you learn a lot from this experience. But remember that you always have to pay attention to rules and follow them very gently so you get to know what you have to do, and get a great score in everything you do.

This response, an article for a school newspaper about a time when knowing the rules was important, demonstrates some evidence of communicating with the audience for the specific purpose of explaining why following and knowing the rules for the CATS test is significant. However, the response is not fully developed and most of the details are unelaborated and repetitious. The writer attempts to guide his reader with transitions as he narrates his testing experience, but simplistic and imprecise language creates coherence problems. This piece demonstrates "Apprentice" characteristics.

## Annotated Novice Student Response

*An effort has been made to reproduce the sample student papers as closely as possible to the original handwritten copy. Holistic scores are given based on the six scoring criteria for on-demand writing (i.e., purpose/audience, idea development, organization, sentences, language, correctness).*

### Student Response

Rules are very important, in some situations they are even more. Everyone has rules to follow for everything they do, if not something will go wrong.

Like cheerleading, for instant, you can't bad mouth the team who lost the game and make fun of. You would get kicked out for the rest of the year. They are really serious about this stuff.

Plus they will feel bad and you'll get the worst punishment — guilt.

Cause I'm a great cheerleader, people on the team look up at me and cause I'm the oldest too. I pretty good at following the rules, I am & I can strike up an attitude.

This should applie for everyone and for every activity or event the do.

So just follow the rules so everyone can do a great job.

This response, an article for a school newspaper telling about a time when knowing the rules was important, demonstrates a limited awareness of the purpose of the task. It gives a general experience, cheerleading, as the time when “knowing the rules was important,” and the support for this idea is minimally developed. Some sentences are awkward and ineffective. This piece demonstrates “Novice” qualities.



## Grade 7 On-Demand Writing Instructional Strategies

The on-demand writing tasks are designed to assess students' ability to use appropriate forms, conventions, and styles to communicate ideas and information given a specific audience, purpose, and form for the piece of writing. Common purposes include persuading; narrating an event; and responding to a graphic, chart, or text. Common forms of written response include letters, articles, and editorials. The instructional strategies below present ideas for helping students explore and master these skills.

### Before Writing

Incorporate opportunities for on-demand writing within standards-based units of study.

- Utilize teacher-generated on-demand prompts for both formative and summative assessments.
- Read and discuss the forms in which students are asked to write (i.e., letters, articles, editorials).
- Analyze techniques writers use, such as:
  - idea development appropriate to purpose (i.e., narrate, persuade, respond)
  - organization appropriate to purpose
  - sentence structure
  - word choice
- Provide students with opportunities to select a prompt to which they respond.

### During Writing

- Review with students the requirement of the prompts (i.e., form, audience, purpose).
- Scaffold this review using “think-alouds,” guided practice, and independent practice.
- Guide students in selection of a prompt based on their experiences and their knowledge of themselves as writers.
- Scaffold instruction of the independent use of the writing process using whole-group guided practice, small-group practice, and independent practice.
- Monitor use of the writing process through the phases of development.
- Adapt instruction of the stages of the writing process to meet the needs of the students.
- Guide students in use of resources (i.e., dictionary, thesaurus).

### After Writing

- Provide opportunities for student reflection following on-demand writing (e.g., writer's notebook entries, exit or admit slips, informal conferences).
- Provide specific feedback to students based on writing criteria (i.e., purpose/audience, idea development, organization, sentences, language, correctness).
- Meet with other teachers to analyze students' on-demand writing in order to inform instruction.

## WRITING TASK 2

### SITUATION:

A Crayola museum? A Cockroach Hall of Fame? A museum to honor the Tooth Fairy? All of these are real museums in the United States that display unusual items. Think of an object that you would like to see honored with its own museum.

### WRITING TASK:

Write a letter to convince the editor of *Interesting Museums Magazine* that your selection would be of interest to museum visitors. Include information about some items that might be displayed in this unusual museum.

**Academic Expectation:** 1.11 “Students write using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.”

**Core Content Code:** 1.4 “*Transactive writing* is informative/persuasive writing that presents ideas and information for authentic audiences to accomplish realistic purposes like those students will encounter in their lives.”

**On-Demand Category:** Persuade

## **Annotated Distinguished Student Response**

Due to the small number of students who achieved a performance level of “Distinguished” on this task, an exemplary paper was not identified for release. Please refer to the Kentucky Writing Assessment Holistic Scoring Guide for examples of information that might be included in a “Distinguished” paper.

## Annotated Proficient Student Response

An effort has been made to reproduce the sample student papers as closely as possible to the original handwritten copy. Holistic scores are given based on the six scoring criteria for on-demand writing (i.e., purpose/audience, idea development, organization, sentences, language, correctness).

### Student Response

Dear Editor,

I have been reading your magazine, *Interestin Museums*, for a while now. I find it very interestink and I think the museums you mention are very unique. However, there is one thing that could be honored with a museum and would be very interesting to museum visitors, that I've never seen mentioned. This is, a museum to honor different hair styles, past and preasent. There are many reasons why I believe that this museum would be of great interest to all museum visitors.

First of all, hair styles have changed dramatically over the years. This would intrigue older visitors that want to re-visit their past and be reminded of their younger days. In the museum they could show a hair timeline. Dating back to where the men use to wear the curly, fancy wigs, and ending a present day. This factor of the museum would not only be appealing to older visitors. It would also lure in younger visitors that just want to veiw the older styles.

Another reason why a hair style museum would be interesting to visitors is that hair styles can be expressive and are important to some people. Styling your hair, for most people, is a daily routine. Wether it be long and curly, short and spickey, or dyed exubrant colors. It's a part of you, just another thing that helps to define who you are. Wether you want to look like your favorite celebrity or have your own unique style, a hair style museum could have models, to help you pick a style that is right for you.

A hair museum could also be very fun and entertaining for people of all ages. The museum could be split up into sections, such as, famous, oldest, and wackiest. The guest could visit the different sections and just laugh at some of the crazy things people have come up with. The museum could also be interactive, so the visitor could expeiriance first hand what it's like to have a mohawk or an afro.

Just think of how interesting it would be, walking around viewing different hair styles. There are so many varietyts of hair. So many things that may be appealing to the visitor. I think that a hair museum would be very interesting to museum visitors. Thank you for reading my letter.

Sincerely,  
Lindsey Brown\*

\* Name has been changed.

*Continued on the next page.* 

## **Annotated Proficient Student Response (continued)**

A clear connection to the audience is established early and is maintained throughout the entirety of the student's letter, initially indicating a "Proficient" score. Reinforcing this notion is significant elaboration of ideas. Historical interests, personal benefits, and entertainment are all addressed informatively and authoritatively. The student also takes the reader through her ideas in a logical fashion, with an engaging introduction and conclusion framing the aforementioned development in a logical and coherent fashion. Minor correctness errors (e.g., "interestin," "preasant," "variety's") are few relative to length and complexity and have little effect on communication.

## Annotated Apprentice Student Response

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### Student Response

999 Scenic Drive\*  
Cascade, KY 40000  
May 13, 2003

1122 Denton Ave.\*  
New York, New York 12345  
Interesting Museums Magazine

Dear Editor,

As a seventh grade student my mind is filled with fun and interesting things. If I'm not mistaken you have built museums on interesting things. I would like for you to build a museum for basketballs.

Many students are playing basketball and enjoy watching it. Basketball is a very athletic sport and you could make a lot of money from basketball. Students may even begin becoming more athletic if they are aware of the basketball museum.

If you choose to grant my wish, the basketball museum could be named "Basketball Hall of Fame." There could be all sorts of things located in the museum.

We could have the building built into a basketball shape and painted like a basketball. Inside we could have a section with signed basketballs from famous players. We could have a area on the wall where some people have painted a scene of a basketball game. Someone could build a basketball out of bubble gum or cereal. Maybe, someone could build a doll house or a room shaped like a basketball.

You have heard my opinion of an interesting museum. You should consider building the "Basketball Hall of Fame."

Sincerely yours,  
Karen Grable\*

\* Addresses and name have been changed.

This response, a persuasive letter to the editor of *Interesting Museums Magazine* about a display item of interest to visitors, demonstrates some evidence of communicating with the audience for the specific purpose of proposing a museum for basketballs. Three reasons for establishing a basketball museum are stated, but they are unelaborated. Details about the specific items to be displayed in the museum are also unelaborated. The language and sentence structure are simplistic. This response demonstrates "Apprentice" qualities.

## Annotated Novice Student Response

### Student Response

Dear Mr. Editor,

I want a museum for white mice. Some people like mice but some people don't. You would have cages, some pictures of mice, food, bottle of water for the mice because they might get thirsty. You could have chairs for people to sit in if they get tired. You could have tables too. Mouse-traps are used to catch mice so they should be in the museum.

Yours Truly,

A Mouse Friend

This response, a persuasive letter to the editor of *Interesting Museums Magazine* about a display item of interest to visitors, demonstrates limited awareness of the purpose to persuade. The writer simply states that some people like mice but some people don't without any further elaboration. The idea of selecting white mice is minimally developed and unrelated details are included. Since suggestions for the exhibit and provisions for the spectators are randomly combined, the organization of this letter is weak. A simple subject-verb pattern throughout makes the sentence structure ineffective. This writing demonstrates "Novice" characteristics.



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